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To: Steve Morrow
From: Chris Ricardi
Date: October 23, 2009
Subject: Interim Response Steps Work Plan Slurry Wall Monitoring Program 3Q09 – August 2009

DATA VALIDATION REPORT
AUGUST 2009 SLURRY WALL SURFACE WATER AND GROUNDWATER
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS
TestAmerica Laboratories Data Sets 360-24080 and 360-24081

1.0 INTRODUCTION

Surface water and groundwater samples were collected from the Olin Chemical Superfund Site from August 10 to August 12, 2009. Samples were analyzed by TestAmerica Laboratories in Westfield, Massachusetts. Data were reported in sample delivery groups (SDGs) 360-24080 and 360-24081. A summary of samples included in this review is contained in Table 1. Samples reviewed in this report were analyzed for the following USEPA SW-846 (USEPA, 1996), USEPA wastewater (USEPA, 1993), or Standard Methods (APHA, 1995):

- dissolved and total metals (aluminum, chromium, and sodium) by USEPA Method 6010B in surface water
- dissolved metals (aluminum and chromium) by USEPA Method 6010B in groundwater
- general chemistry analyses for ammonia by USEPA Method 350.1 (Lachat 10-107-06-1), chloride, sulfate, nitrate, and nitrite by USEPA Method 300, and specific conductance by SM18 SM 2510B

The Draft Interim Response Steps Work Plan (MACTEC, 2007) and the MassDEP Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the Massachusetts Contingency Plan (MCP) [MassDEP, 2004] were used as references during the review. Analytical packages were reviewed using the Level 1 Data Quality Evaluation checklists that were developed for the Olin Wilmington annual and quarterly groundwater monitoring tasks. Final sample results are presented on data summaries in Table 2.

2.0 METALS

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
* Blanks
* Matrix Spike Analysis
* Laboratory Duplicate Analysis
* Field Duplicate Results
* Laboratory Control Sample

* Detection limits
  Dissolved vs. Total Metals Comparison

* = indicates that criteria were met for this parameter

Dissolved vs. Total Metals Comparison

Dissolved sodium concentrations are significantly greater than total sodium concentrations reported in a subset of samples in SDG 360-24080. The result for total and dissolved sodium in samples OC-ISCO-1, OC-ISCO-2, OC-ISCO-3, OC-PZ16RR, OC-PZ17RR, and OC-PZ18R was qualified estimated (J).

3.0 GENERAL CHEMISTRY – Ammonia, Chloride, Sulfate, Nitrate, Nitrite, and Specific Conductance

Data were reviewed for the following parameters:

* Data Completeness
* Sample Collection and Holding Time
* Blanks
* Laboratory Control Sample
  Matrix Spike Analysis
* Field Duplicates
* Detection limits

* = indicates that criteria were met for this parameter

Matrix Spike Results

Sulfate MS/MSD analyses were completed using sample OC-PZ-18R. The sulfate MS and MSD percent recovery (126 and 127) is greater than the upper project limit of 125. The result for sulfate in the unspiked samples OC-PZ-18R and OC-PZ-18RDUP were qualified estimated (J).

Except for the validation actions noted above, the results are interpreted to be usable as reported by TestAmerica.

Chris Ricardi

10/7/09

Chris Ricardi, NRCC-EAC
Senior Chemist

Date

MJ Murphy

10/28/09

Michael Murphy
Project Principal

Date

Reference:

American Public Health Association (APHA), 1995. "Standard Methods for Examination of Water and Wastewater"; 19th Edition; APHA, 1015 Fifteenth St., NW. Washington, D.C. 20005.

MACTEC, 2007. "Draft Interim Response Steps Work Plan"; Olin Chemical Superfund Site; 51 Eames Street, Wilmington, Massachusetts; July 25, 2007.

Massachusetts Department of Environmental Protection (MassDEP), 2004. "The Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the Massachusetts Contingency Plan (MCP)"; Bureau of Waste Site Cleanup; 1 Winter Street, Boston, Massachusetts 02108; WSC-CAM; May 2004.

U.S. Environmental Protection Agency (USEPA), 1993. "Methods for Chemical Analysis and Water and Wastes (MCAWW)", EPA/600/4-79-020 (March 1983) with updates and supplements EPA/600/4-91-010 (June 1991), EPA/600/R-92-129 (August 1992) and EPA/600/R-93-100 (August 1993).

U.S. Environmental Protection Agency (USEPA), 1996. "Test Methods for Evaluating Solid Waste"; Laboratory Manual Physical/Chemical Methods; Office of Solid Waste and Emergency Response; Washington, DC; SW-846; November 1986; Revision 4 -December 1996.